

GenCore version 5.1.4 p5 4578
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OM protein - protein search, using sw model

Run on: March 17, 2003, 08:50:21 ; Search time 18 Seconds
(without alignments)
1992.202 Million cell updates/sec

Title: US-10-010-227-3
Perfect score: 4055
Sequence: 1 MPGAESTPQTLYDKVLQAHV.....KAVPPTTNGEKKEPLEW 778

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 199416 seqs, 46092074 residues

Total number of hits satisfying chosen parameters: 199416

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 100 summaries

Database : Published Applications_AA:*

- 1: /cgn2_6/ptodata/1/pubppaa/US08_NEW_PUB pep:*
- 2: /cgn2_6/ptodata/1/pubppaa/PC7_NEW_PUB pep:*
- 3: /cgn2_6/ptodata/1/pubppaa/US06_NEW_PUB pep:*
- 4: /cgn2_6/ptodata/1/pubppaa/US06_PUBCOMB pep:*
- 5: /cgn2_6/ptodata/1/pubppaa/US07_NEW_PUB pep:*
- 6: /cgn2_6/ptodata/1/pubppaa/US07_PUBCOMB pep:*
- 7: /cgn2_6/ptodata/1/pubppaa/PC7US_PUBCOMB pep:*
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- 11: /cgn2_6/ptodata/1/pubppaa/US10_NEW_PUB pep:*
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- 13: /cgn2_6/ptodata/1/pubppaa/US60_NEW_PUB pep:*
- 14: /cgn2_6/ptodata/1/pubppaa/US60_PUBCOMB pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1666.5	41.1	644	10	US-09-815-242-5730 Sequence 5730, Ap
2	1507.5	37.2	474	10	US-09-815-242-5127 Sequence 5127, Ap
3	1479.5	36.5	466	10	US-09-815-242-110021 Sequence 110021, A
4	1471	36.3	469	10	US-09-815-242-11164 Sequence 11164, A
5	1450.5	35.8	466	10	US-09-815-242-14017 Sequence 14017, A
6	1347.5	33.2	481	9	US-09-738-626-4952 Sequence 4952, Ap
7	1282	31.6	466	10	US-09-815-242-12156 Sequence 12156, A
8	1282	31.6	466	10	US-09-815-242-12156 Sequence 12156, A
9	749	18.5	264	10	US-09-939-980-477 Sequence 477, App
10	635	15.7	424	12	US-09-815-242-11900 Sequence 11900, A
11	542	13.4	212	10	US-09-815-242-11500 Sequence 11500, A
12	528.5	13.0	443	12	US-10-027-450-38 Sequence 38, Appl
13	523.5	12.9	443	12	US-10-027-450-38 Sequence 38, Appl
14	506	12.5	201	10	US-09-815-242-14016 Sequence 14016, A
15	495	12.2	200	10	US-09-815-242-11165 Sequence 11165, A
16	493	12.2	173	10	US-09-939-980-476 Sequence 476, App
17	491	12.1	201	10	US-09-815-242-10020 Sequence 10020, A
18	461.5	11.4	200	10	US-09-815-242-11548 Sequence 11548, A
19	422	10.4	190	10	US-09-815-242-12157 Sequence 12157, A

20	389.5	9.6	197	9	US-09-738-626-4953 Sequence 4953, Ap
21	367.5	9.1	943	9	US-09-738-626-5199 Sequence 5199, Ap
22	339	8.1	963	9	US-09-924-3968-20 Sequence 20, Appl
23	326.5	8.1	952	9	US-09-924-3968-18 Sequence 18, Appl
24	303	7.5	852	10	US-09-815-242-11535 Sequence 11535, A
25	303	7.5	853	10	US-09-815-242-11363 Sequence 11363, A
26	250	6.2	127	12	US-10-027-450-40 Sequence 40, Appl
27	247	6.1	202	10	US-09-734-017A-12 Sequence 12, Appl
28	209	5.2	263	12	US-10-027-450-51 Sequence 51, Appl
29	208.5	5.1	195	12	US-10-027-450-42 Sequence 42, Appl
30	196.5	4.8	249	12	US-10-027-450-47 Sequence 47, Appl
31	195.5	4.8	244	12	US-10-027-450-53 Sequence 53, Appl
32	187	4.6	257	12	US-10-027-450-49 Sequence 49, Appl
33	141	3.5	417	10	US-09-925-302-700 Sequence 700, App
34	137.5	3.4	126	12	US-10-027-450-44 Sequence 44, Appl
35	129.5	3.2	209	9	US-10-192-584-7 Sequence 7, Appl
36	122.5	3.0	2353	10	US-09-797-862-33 Sequence 33, Appl
37	117	2.9	806	10	US-09-815-242-11774 Sequence 11774, A
38	115.5	2.8	844	10	US-09-815-242-10039 Sequence 10039, A
39	115.5	2.8	7968	9	US-10-077-130-5 Sequence 5, Appl
40	115	2.8	4613	9	US-09-860-846-31 Sequence 31, Appl
41	115	2.8	4613	10	US-09-861-289-31 Sequence 31, Appl
42	115	2.8	11877	9	US-09-860-846-6 Sequence 6, Appl
43	115	2.8	11877	10	US-09-861-289-6 Sequence 6, Appl
44	112.5	2.8	846	10	US-09-815-242-13904 Sequence 13904, A
45	112	2.8	595	10	US-09-826-212-9 Sequence 9, Appl
46	112	2.8	595	10	US-09-935-727-11 Sequence 11, Appl
47	109.5	2.7	989	10	US-09-815-242-13236 Sequence 13236, A
48	109	2.7	595	10	US-09-921-667-6 Sequence 6, Appl
49	108.5	2.7	939	10	US-09-815-242-10797 Sequence 10797, A
50	108	2.7	667	9	US-09-815-242-10709 Sequence 10709, A
51	108	2.7	1477	9	US-10-092-880-4 Sequence 4, Appl
52	106.5	2.6	1150	10	US-09-870-122-3 Sequence 3, Appl
53	106.5	2.6	1167	10	US-09-870-122-3 Sequence 2, Appl
54	106	2.6	833	10	US-09-844-281-1 Sequence 1, Appl
55	106	2.6	5315	9	US-09-860-846-2 Sequence 2, Appl
56	106	2.6	5315	10	US-09-861-289-2 Sequence 2, Appl
57	105.5	2.6	1199	9	US-10-092-880-9 Sequence 9, Appl
58	105.5	2.6	2869	9	US-09-738-626-4434 Sequence 4434, Ap
59	104	2.6	609	9	US-09-866-0500-498 Sequence 498, App
60	103.5	2.6	1881	10	US-09-870-122-23 Sequence 23, Appl
61	102	2.5	1786	9	US-09-742-096-3 Sequence 3, Appl
62	101	2.5	804	10	US-09-815-242-13920 Sequence 13920, A
63	101	2.5	1059	10	US-09-826-312-2 Sequence 2, Appl
64	100	2.5	3782	9	US-09-860-846-4 Sequence 4, Appl
65	100	2.5	3782	10	US-09-861-289-4 Sequence 4, Appl
66	99.5	2.5	714	9	US-09-712-363-149 Sequence 149, App
67	99	2.4	553	10	US-09-954-314-6 Sequence 6, Appl
68	99	2.4	2037	9	US-09-951-402-3 Sequence 3, Appl
69	99	2.4	2037	10	US-09-951-401-3 Sequence 3, Appl
70	99	2.4	2037	9	US-09-922-101-3 Sequence 3, Appl
71	98.5	2.4	664	10	US-09-823-038A-48 Sequence 48, Appl
72	98	2.4	851	10	US-09-730-989-4 Sequence 4, Appl
73	97	2.4	578	10	US-09-052-753-7 Sequence 7, Appl
74	97	2.4	627	9	US-10-047-260-36 Sequence 36, Appl
75	97	2.4	5701	10	US-09-864-761-37319 Sequence 37319, A
76	97	2.4	26262	9	US-09-759-5088-2 Sequence 2, Appl
77	96	2.4	836	9	US-09-738-626-5805 Sequence 5805, Ap
78	96	2.4	1164	10	US-09-870-122-1 Sequence 1, Appl
79	96	2.4	4999	9	US-09-821-883-29 Sequence 29, Appl
80	96	2.4	4999	10	US-09-821-883-29 Sequence 29, Appl
81	95.5	2.4	549	10	US-09-815-242-11313 Sequence 11313, A
82	95.5	2.4	680	9	US-09-738-626-4877 Sequence 4877, Ap
83	95.5	2.4	804	10	US-09-815-242-10393 Sequence 10393, A
84	95.5	2.4	806	10	US-09-815-242-11057 Sequence 11057, A
85	95.5	2.4	1142	10	US-09-894-998-3 Sequence 3, Appl
86	95	2.3	336	10	US-09-815-242-1430 Sequence 12430, A
87	95	2.3	339	10	US-09-815-242-5496 Sequence 5496, Ap
88	95	2.3	510	10	US-09-815-242-5256 Sequence 5256, Ap
89	95	2.3	526	10	US-09-925-637-74 Sequence 74, Appl
90	95	2.3	760	9	US-09-941-831-292 Sequence 292, App
91	95	2.3	944	9	US-09-912-363-19 Sequence 19, Appl
92	95	2.3	948	9	US-09-989-350-14 Sequence 14, Appl

Sequence 140, App
Sequence 10, Appl
Sequence 5845, Ap
Sequence 45, Appl
Sequence 15, Appl
Sequence 9, Appl
Sequence 20, Appl
Sequence 19, Appl

ALIGNMENTS

RESULT 1
US-09-815-242-5730
; Sequence 5730, Application US/09815242
; Patent No. US20020061569A1
; GENERAL INFORMATION:
; APPLICANT: Haselbeck, Robert
; APPLICANT: Ohlsen, Kari L.
; APPLICANT: Zyskind, Judith W.
; APPLICANT: Wall, Daniel
; APPLICANT: Trawick, John D.
; APPLICANT: Carr, Grant J.
; APPLICANT: Yamamoto, Robert T.
; APPLICANT: Xu, H. Howard
; TITLE OF INVENTION: Identification of Essential Genes in
; TITLE OF INVENTION: Prokaryotes
; FILE REFERENCE: ELITRA.011A
; CURRENT APPLICATION NUMBER: US/09/815,242
; CURRENT FILING DATE: 2001-03-21
; PRIOR APPLICATION NUMBER: 60/191,078
; PRIOR FILING DATE: 2000-03-21
; PRIOR APPLICATION NUMBER: 60/206,848
; PRIOR FILING DATE: 2000-05-23
; PRIOR APPLICATION NUMBER: 60/207,727
; PRIOR FILING DATE: 2000-05-26
; PRIOR APPLICATION NUMBER: 60/242,578
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: 60/253,625
; PRIOR FILING DATE: 2000-11-27
; PRIOR APPLICATION NUMBER: 60/257,931
; PRIOR FILING DATE: 2000-12-22
; PRIOR APPLICATION NUMBER: 60/269,308
; PRIOR FILING DATE: 2001-02-16
; NUMBER OF SEQ ID NOS: 14110
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 5730
; LENGTH: 644
; TYPE: PRT
; ORGANISM: Staphylococcus aureus
; FEATURE:
; NAME/KEY: VARIANT
; LOCATION: (1)...(644)
; OTHER INFORMATION: Xaa = Any Amino Acid
US-09-815-242-5730
Query Match 41.1%; Score 1666.5; DB 10; Length 644;
Best Local Similarity 48.7%; Pred. No. 3.3e-130;
Matches 352; Conservative 92; Mismatches 198; Indels 81; Gaps 10;
QY 9 QTLVYKVLQAHVDEKLDGTGTVLYIDRLHVEHTVSPQAFGLRQVNRKVRPDCITLATTD 68
DB 3 QTLFDRVNRHVLVYKLGEPQLLYIDRLHVEHTVSPQAFGLRQVNRKVRPDCITLATTD 62
QY 69 HNVPTTSRKALDIASFIEDSRCTVLEENKVFVYFGLSDKQGVHVGPEQG 128
DB 63 HNVPTI-----DIFN-IKDEIANKQITTLQKNAIDFGVHIFDMGSDQGLVHVGPETG 115
QY 129 FTLPGLTVVCGDSHTSTHGAFAFGIGTSEVEHLVATQCLITPKRSKNMRIQVDSGLAP 188
DB 116 LTPGKTIIVCGDSHTATGAFGAIAFGIGTSEVEHVFATQTLMTQPKNLKIDINGTLPT 175

QY 189 GVSKDVLVHAIIGIITAGTGAVIEPCGVSIRSLSMEARMSICNMSTEGGARGMWAPD 248
DB 176 GVYAKOIIHLIITGYGVDFGTGYALEFTGETIKNLSMDGRMTICNMAIEGAKYGIIOPD 235
QY 249 EITFEYKGRPLAPKVDSPWHKATQYKQLQSDPGAKYDIDVIDAKDIDVPTLTWTGSP 308
DB 236 DITFEYKGRPLAPKVDSPWHKATQYKQLQSDPGAKYDIDVIDAKDIDVPTLTWTGSP 290
QY 309 EDVVPITGVVDPPTFATEAKKADGRMLQYMGKAGTPMEDIPVDKVFISGCTNSRIED 368
DB 291 EMGVNFSEPP-----EISDINDQRAYDMGLEPGKAEIDILGYVFLGCTNARLSD 343
QY 369 LRAAAVVKGRKAPNVKSAWVPGSLVKTQAEELGDKIFEAGEWREAGSCMCLGM 428
DB 344 LIEASHIVKGNKVHPNI-TAIVVPGSRTVREAEKGLGDTIFKNAGFEWREPGSCMCLGM 402
QY 429 NPDILAPQBERCASTSNRNFGROGAGGRTHLMSVMAAAAGIVGKLADVRKLTIDYKASPH 488
DB 403 NPDQVPEGVHCASSTSNRNFGROGAGGRTHLMSVMAAAAGIVGKLADVRKLTIDYKASPH 454
QY 489 IAAVQKSTVTTPHVDERINQDAHEKOIADIPEDNNGPHTNWSASVGTSGALPKFTILKG 548
DB 455 -----VXMAAIKPTITYKG 469
QY 549 IAAPLEKANVDTDAIIPKQFLTKITKGLGNALFVEMREFNEDGTEKSDFLNKEPYRKAS 608
DB 470 KIVPLFNDNIDTQIIPKVHLKRISKSGFGFPFADWRYLPDGSNDPDPNPKPOYKAS 529
QY 609 ILVCTGANFGCGSRHAPMALNDFGIRSVIAPSFADIFFNNSFKNGMLPIPIKDOAQIE 668
DB 530 ILI-TGDNFGCGSRHAPMALNDFGIRSVIAPSFADIFFNNSFKNGMLPIPIKDOAQIE 587
QY 669 AIAAARAGKEIEVDLPNQLIKNATGETICTFEVEERFKHVLNGLDDIGLTMQWEDKIA 728
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QY 729 EFE 731
DB 642 KYE 644
RESULT 2
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; Sequence 5127, Application US/09815242
; Patent No. US20020061569A1
; GENERAL INFORMATION:
; APPLICANT: Haselbeck, Robert
; APPLICANT: Ohlsen, Kari L.
; APPLICANT: Zyskind, Judith W.
; APPLICANT: Wall, Daniel
; APPLICANT: Trawick, John D.
; APPLICANT: Carr, Grant J.
; APPLICANT: Yamamoto, Robert T.
; APPLICANT: Xu, H. Howard
; TITLE OF INVENTION: Identification of Essential Genes in
; TITLE OF INVENTION: Prokaryotes
; FILE REFERENCE: ELITRA.011A
; CURRENT APPLICATION NUMBER: US/09/815,242
; CURRENT FILING DATE: 2001-03-21
; PRIOR APPLICATION NUMBER: 60/191,078
; PRIOR FILING DATE: 2000-03-21
; PRIOR APPLICATION NUMBER: 60/206,848
; PRIOR FILING DATE: 2000-05-23
; PRIOR APPLICATION NUMBER: 60/207,727
; PRIOR FILING DATE: 2000-05-26
; PRIOR APPLICATION NUMBER: 60/242,578
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: 60/253,625
; PRIOR FILING DATE: 2000-11-27
; PRIOR APPLICATION NUMBER: 60/257,931
; PRIOR FILING DATE: 2000-12-22
; PRIOR APPLICATION NUMBER: 60/269,308
; PRIOR FILING DATE: 2001-02-16


```

; APPLICANT: SENOH, AKIHITO
; APPLICANT: IKEDA, MASATO
; APPLICANT: OZAKI, AKIO
; TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
; FILE REFERENCE: 249-125
; CURRENT APPLICATION NUMBER: US/09/738,626
; CURRENT FILING DATE: 2000-12-18
; PRIOR APPLICATION NUMBER: JP 99/377484
; PRIOR FILING DATE: 1999-12-16
; PRIOR APPLICATION NUMBER: JP 00/159162
; PRIOR FILING DATE: 2000-04-07
; PRIOR APPLICATION NUMBER: JP 00/280988
; PRIOR FILING DATE: 2000-08-03
; NUMBER OF SEQ ID NOS: 7059
; SOFTWARE: PatentIn ver. 3.0
; SEQ ID NO 4952
; LENGTH: 481
; TYPE: PRF
; ORGANISM: Corynebacterium glutamicum
US-09-738-626-4952

Query Match          33.2%; Score 1347.5; DB 9; Length 481;
Best Local Similarity 57.6%; Pred. No. 7.1e-104;
Matches 273; Conservative 61; Mismatches 127; Indels 13; Gaps 6;

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Db 15 TLAKVWRDHVVSXKENGEPDLLYIDLQLLHEVTSPOAFEGDRLNAGKVRVRRPDCLTATD 74
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QY 69 HNVYTSRKALKDIASFKEKD--SRTOCVTLSENVKRGVYTFGLSDKROGIVHVIQGE 126
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Db 75 HNVTEGIGKT---GSLLLEINDKISRLQVSTLRDNCEEGVYLHPMGDVRQGIVHTVGRQ 130
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QY 127 QGFLPRTGVVCGDSHTSTHGAFGALAFGIGTSEVENVATQCLITKRSKNMRIQVDEGL 186
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 131 LGATQPGMTIYCGDSHTTHGAFGSMAFGIGTSEVENVATQCLITKRSKNMRIQVDEGL 190
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:

QY 187 APGVSSKQDVLAHIGLIGTAGGTGAVIEFGSGVIRSLSEARNMSICNMSIEGARGAMVA 246
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 191 QPGVSSKQDLIALIAGIGTGGGQGYVLEFYGSAIRKMSMDAMTMCNMSIEGARGAMVA 250
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:

QY 247 PDEITFEYLRKRPAPKXDSPEMHKATQYWKLOSDPQAKYIDVFIADKDIPTLTWTGT 306
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 251 PDQYTFDFVEBREMVPK--GADWDEAVAYWKTLPYDEGTFPKVVEIDDSALTPFITWGT 308
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QY 307 SPEDVVPITGVVPDETEFAATEAKADGRRLQYMGKAGTPEMDIPEVDKVFISGCTNSRI 366
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 309 NPGGGLPFGESVPSPEDEFTNDVDAAEKALQYMDLVPESTPLADIKIDIVFISGCTNARI 368
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:

QY 367 EDLRAAAAYVGRKKAAPVYKSAVVVPGSLVYTOAESEGLDKIFEEAGFEWREAGCSMCL 426
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Db 369 EDLQIAADILKGNHAKIDGMR--MMVVVPSSTWIKQEAVALGLDKIFPDAGAEWMTAGCSMCL 427
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QY 427 GMDNDILAPQERCASTSNRNFEGRGAGGRTILMSFPWMAAAAGIVGKL--ADV 477
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RESULT 7
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; Sequence 12156, Application US/09815242
; GENERAL INFORMATION:
; APPLICANT: Haselbeck, Robert
; APPLICANT: Ohlsen, Kari L.
; APPLICANT: Zyskind, Judith W.
; APPLICANT: Wall, Daniel
; APPLICANT: Trawick, John D.
; APPLICANT: Carr, Grant J.
; APPLICANT: Yamamoto, Robert T.
; APPLICANT: Xu, H. Howard
; TITLE OF INVENTION: Identification of Essential Genes in
; TITLE OF INVENTION: Prokaryotes
```

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; FILE REFERENCE: ELITRA.011A
; CURRENT APPLICATION NUMBER: US/09/815,242
; CURRENT FILING DATE: 2001-03-21
; PRIOR APPLICATION NUMBER: 60/191,078
; PRIOR FILING DATE: 2000-03-21
; PRIOR APPLICATION NUMBER: 60/206,848
; PRIOR FILING DATE: 2000-05-23
; PRIOR APPLICATION NUMBER: 60/207,727
; PRIOR FILING DATE: 2000-05-26
; PRIOR APPLICATION NUMBER: 60/242,578
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: 60/253,625
; PRIOR FILING DATE: 2000-11-27
; PRIOR APPLICATION NUMBER: 60/257,931
; PRIOR FILING DATE: 2000-12-22
; PRIOR APPLICATION NUMBER: 60/269,308
; PRIOR FILING DATE: 2001-02-16
; NUMBER OF SEQ ID NOS: 14110
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 12156
; LENGTH: 456
; TYPE: PRF
; ORGANISM: Staphylococcus aureus
US-09-815-242-12156

Query Match          31.6%; Score 1282; DB 10; Length 456;
Best Local Similarity 54.4%; Pred. No. 1.8e-98;
Matches 257; Conservative 64; Mismatches 131; Indels 20; Gaps 5;

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Db 3 QTLVFDKVMNHVYVYKKGEBOLYIDLHLIHEVTSPOAFEGDRLNAGKVRVRRPDCLTATD 62
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:

QY 69 HNVYTSRKALKDIASFKEKDDSRTOCVTLSENVKRGVYTFGLSDKROGIVHVIQGE 128
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 63 HNVPTI-----DIFN-IKQELANKQITTLQKNAIDGVHIFDMGSDQGIYHNVGPEFG 115
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:

QY 129 FTLPRTGVVCGDSHTSTHGAFGALAFGIGTSEVENVATQCLITKRSKNMRIQVDEGLAP 188
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 116 LTQPGMTIYCGDSHTTHGAFGALAFGIGTSEVENVATQCLITKRSKNMRIQVDEGLAP 175
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:

QY 189 GVSCKQDVLAHIGLIGTAGGTGAVIEFGSGVIRSLSEARNMSICNMSIEGARGAMVAPD 248
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 176 GYVAKDIIHLITVYGDFGTGVALFTGTETIKNLSMDGRWTCNMALIEGAKYGIQPD 235
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:

QY 249 EITFEYLRKRPAPKXDSPEMHKATQYWKLOSDPQAKYIDVFIADKDIPTLTWTGSP 308
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 236 DITFEYKGRPFADNF---AKSVDKRELVSDDAIIDVIVIELDVSTLEPQYTWGTNP 290
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:

QY 309 EDVVPITGVVPDETEFAATEAKADGRRLQYMGKAGTPEMDIPEVDKVFISGCTNSRIED 368
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 291 EMGVNTESEPP-----ELSDINDQRAYWYMGLEPQAKEDIDLGYVFLSSCTNARLSD 343
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:

QY 369 LRRAAAAYVGRKKAAPVYKSAVVVPGSLVYTOAESEGLDKIFEEAGFEWREAGCSMCLGM 428
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 344 LIRASHIVKGNKKNHPNI--TAIVVPGSRTVREAEKIGLDTIFKNAGGEWREPPGCSMCLGM 402
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:

QY 429 NPDILAPQERCASTSNRNFEGRGAGGRTILMSFPWMAAAAGIVGKLADVRL 480
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 403 NPDQVEGVHCASTSNRNFEGRGAGGRTILVSPAMAAAIAHGFVDVRKV 454
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:

RESULT 8
US-09-815-242-12928
; Sequence 12928, Application US/09815242
; GENERAL INFORMATION:
; APPLICANT: Haselbeck, Robert
; APPLICANT: Ohlsen, Kari L.
; APPLICANT: Zyskind, Judith W.
; APPLICANT: Wall, Daniel
; APPLICANT: Trawick, John D.
; APPLICANT: Carr, Grant J.
```

```

; APPLICANT: Yamamoto, Robert T.
; APPLICANT: Xu, H. Howard
; TITLE OF INVENTION: Identification of Essential Genes in
; TITLE OF INVENTION: Prokaryotes
; FILE REFERENCE: ELITRA.011A
; CURRENT APPLICATION NUMBER: US/09/815,242
; CURRENT FILING DATE: 2001-03-21
; PRIOR APPLICATION NUMBER: 60/191,078
; PRIOR FILING DATE: 2000-03-21
; PRIOR APPLICATION NUMBER: 60/206,848
; PRIOR FILING DATE: 2000-05-23
; PRIOR APPLICATION NUMBER: 60/207,727
; PRIOR FILING DATE: 2000-05-26
; PRIOR APPLICATION NUMBER: 60/242,578
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: 60/253,625
; PRIOR FILING DATE: 2000-11-27
; PRIOR APPLICATION NUMBER: 60/257,931
; PRIOR FILING DATE: 2000-12-22
; PRIOR APPLICATION NUMBER: 60/269,308
; PRIOR FILING DATE: 2001-02-16
; NUMBER OF SEQ ID NOS: 14110
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 12928
; LENGTH: 456
; TYPE: PRT
; ORGANISM: Staphylococcus aureus
; US-09-815-242-12928

Query Match 31.6%; Score 1282; DB 10; Length 456;
Best Local Similarity 54.4%; Pred. No. 1.8e-98;
Matches 257; Conservative 64; Mismatches 131; Indels 20; Gaps 5;

Qy 9 QTLQVQVHVEKLDGTVLLYIDRLHVHTVSPQAFGLRQKVRPDPCTLATTTD 68
Db 3 QTLQVQVHVEKLDGTVLLYIDRLHVHTVSPQAFGLRQKVRPDPCTLATTTD 62
Qy 69 HNPVTSRKALKDIASFIEDDSRTQCVLEENVKFVTVFGLSDKQGVHVIQPEQ 128
Db 63 HNPVTI-----DIFN-IKDEIANKIITLQKNAIDFGVHIFDMGSDQGVHVGPE 115
Qy 129 FTLPQGTIVCGDSHTSHGAFALAFIGTSEVEHVLATQCLITKRSKNMIRIQVDGELAP 188
Db 116 FTLPQGTIVCGDSHTSHGAFALAFIGTSEVEHVLATQCLITKRSKNMIRIQVDGELAP 175
Qy 189 GVSSKDVHLHATIGTAGTGAIVFCGVSIRLSMEARMSICNMSIEGAGAGVAPD 248
Db 176 GYVAKDIIILHLYKTYGVDFGTGYALEFTGTETIKNLSMDGRMTICNMAIEGAGAGVAPD 235
Qy 249 BITFEVYKGRPLAPKYDSEPHWKATQYWKNLQSDPGAKYDIDVFIIDAKDIVPTLTWTGTP 308
Db 236 DITFEVYKGRPLAPKYDSEPHWKATQYWKNLQSDPGAKYDIDVFIIDAKDIVPTLTWTGTP 290
Qy 309 EDWVPIGTVPDPETPAEAKKADGRMLQYMGKAGTGMEDIPVCKVFTGSCNTRIED 368
Db 291 ENGWNFSEFP-----EINDINQRAVDYMGLEPGQKAEIDDLGVVFLGSCNTRIED 343
Qy 369 LRAAAVVGKRPKAPNVKAMVPGSLVKTQABEGLDKIFEAAGFEWEAGCSMCLGM 428
Db 344 LIEASHIVKGNKHPNI-TAIVVPGSRTVKKEAKGLDITIFNAGFEWEAGCSMCLGM 402
Qy 429 NPDILAPQERCASTNRNPEGROGAGRTHLMSVMAAAAGIVKGLADVRKL 480
Db 403 NPDQVPEGVHCASTNRNPEGROGAGRTHLMSVMAAAAGIVKGLADVRKL 454

RESULT 9
US-09-939-980-477
; Sequence 477: Application US/09939980
; Patent No. US20020082234A1
; GENERAL INFORMATION:
; APPLICANT: Black, Michael
; Burnham, Martin
;
; Hodgson, John
; Knowles, David
; Lonetto, Michael
; Nicholas, Richard
; Pratt, Julie
; Reichard, Richard
; Rosenberg, Martin
; Ward, Judith
; TITLE OF INVENTION: No. US20020082234A1 Prokaryotic Polynucleotides,
; Polypeptides and Their Uses
; NUMBER OF SEQUENCES: 534
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: SmithKline Beecham Corporation
; STREET: 709 Swedeland Road
; CITY: King of Prussia
; STATE: PA
; COUNTRY: USA
; ZIP: 19406-0939
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSeq for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/939,980
; FILING DATE: 27-Aug-2001
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/936,165
; FILING DATE: <Unknown>
; ATTORNEY/AGENT INFORMATION:
; NAME: Gimmi, Edward R
; REGISTRATION NUMBER: 38,891
; REFERENCE/DOCKET NUMBER: P50549
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 610-270-4478
; TELEFAX: 610-270-5090
; TELEX: <Unknown>
; INFORMATION FOR SEQ ID NO: 477:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 264 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: Protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 477:
;
; US-09-939-980-477

Query Match 18.5%; Score 749; DB 10; Length 264;
Best Local Similarity 53.8%; Pred. No. 1.7e-54;
Matches 147; Conservative 39; Mismatches 75; Indels 12; Gaps 3;

Qy 15 VLQHVHVEKLDGTVLLYIDRLHVHTVSPQAFGLRQKVRPDPCTLATTTDHNVP 74
Db 1 VVNRHVLXGKXGDPQLLYIDRLHVHTVSPQAFGLRQKVRPDPCTLATTTDHNVP 60
Qy 75 SRKALKDIASFIEDDSRTQCVLEENVKFVTVFGLSDKQGVHVIQPEQFTLP 134
Db 61 -----DIFN-IKDEIANKIITLQKNAIDFGVHIFDMGSDQGVHVGPE 113
Qy 135 TVVCGDSHTSHGAFALAFIGTSEVEHVLATQCLITKRSKNMIRIQVDGELAPVSSKD 194
Db 114 TVVCGDSHTSHGAFALAFIGTSEVEHVLATQCLITKRSKNMIRIQVDGELAPVSSKD 173
Qy 195 VVLHAIIGITAGTGAIVFCGVSIRLSMEARMSICNMSIEGAGAGVAPDEITFEY 254
Db 174 IILHLIKTYGVDFGTGYALEFTGTETIKNLSMDGRMTICNMAIEGAGAGVAPDEITFEY 233
Qy 255 LKGRPLAPKYDSEPHWKATQYWKNLQSDPGAKY 287
Db 234 VKGRPFADNF-----AKSVKWKRELYSDGTRY 261
```

```

RESULT 10
US-10-027-450-45
; Sequence 45, Application US/10027450
; Patent No. US20020102715A1
; GENERAL INFORMATION:
; APPLICANT: Falco, Saverio Carl
; APPLICANT: Hiltz, William D.
; APPLICANT: Kinney, Anthony J.
; APPLICANT: Cahoon, Rebecca E.
; APPLICANT: Rafalski, J. Antoni
; TITLE OF INVENTION: PLANT BRANCHED CHAIN AMINO ACID BIOSYNTHETIC ENZYMES
; FILE REFERENCE: BB-1126
; CURRENT APPLICATION NUMBER: US/10/027,450
; PRIOR FILING DATE: 2001-12-20
; PRIOR APPLICATION NUMBER: 60/063,423
; PRIOR FILING DATE: 1997 October 28
; NUMBER OF SEQ ID NOS: 54
; SOFTWARE: Microsoft Word Version 7.0A
; SEQ ID NO 45
; LENGTH: 424
; TYPE: PRT
; ORGANISM: Methanococcus jannaschii
US-10-027-450-45

```

```

Query Match          15.7%; Score 635; DB 12; Length 424;
Best Local Similarity 33.1%; Pred. No. 1e-44;
Matches 157; Conservative 86; Mismatches 174; Indels 58; Gaps 9;

```

```

10 TLVYDKVL-QAHVVEKLDGTVLL-YIDRHLVHEVTSPOAFEGLRNAG-RKYVRPDTLAT 66
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
4 TIVEKILAKSGKKEVSGDIYMANIDVAMHDIPLVNLKRYGIEKWNPEKIVL 63
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
67 TDHNVPTTSKALKDIAISFIKEDSRTOCVLEENKKEFGVTYFGLSDKQGIIVHIGVE 126
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
64 FDHQVPADSIKAAEN-----HILMRKFKKEGKIYF--YDIREGVCHQLPBE 108
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
127 QGFLLPCTTVVCGSHSTTHGAFGLARFAGTSEVHEHLATQCLLTSKNMRIQVDEL 186
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
109 KGHVAPBEVVVAGDSHCTTHGAFGPAFAGISGTDMAHVFATGKLPKVPETTYENITGDL 168
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
187 APGVSKDVLVLAIGIIGTAGTGAIEFCGSVIRLSMEARMSICNNISIEGARAGMVA 246
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
169 QPVYTSKDVILSIIGEVGDATYKACQFGGETYKMSIASRMTMTMAIEHGKGTIGIE 228
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
247 PDEITTEYLGKRLAPARYKDSPEWHKATQYWKLOSDDPKAKYDIDVIFDAKDIVPTLWTGT 306
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
229 PDEKITQYVK-----EAMKKHGTERTPEFVIXGDEDAEFAEVEIADKIEPVFACPH 280
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
307 SPEDVVPITGVDPPEFATPEAKKADGRMLQYWGKAGTMEEDIPVUKVFTGCTNRI 366
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
281 NVUNV-----KQAREVAGK-----PIDQVFTGCTNRL 309
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
367 EDLRAAAADVVKRKAENKVSAMVPGSGLVKTOAEELGLDKIFEAGFEWREACSGMCL 426
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
310 EDLRMAIKIIEKKGADVDVRYVTPASREBYLKALKKGIIIEKPLKYGCVVNTBSCSACM 369
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
427 GANPDLIAPERCASISNNRVEFGQA-GGFTHMSPVMAAAGIVGLADVRKL 480
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
370 GSLVYLGPEVEVSTSNRFRGQSLAEIYIASPTAAACAVKGLVDPRLD 424
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :

```

```

RESULT 11
US-09-815-242-11900
; Sequence 11900, Application US/09815242
; Patent No. US20020061569A1
; GENERAL INFORMATION:
; APPLICANT: Haselbeck, Robert
; APPLICANT: Ohlsen, Karl L.
; APPLICANT: Zyskind, Judith W.
; APPLICANT: Wall, Daniel
; APPLICANT: Trawick, John D.
; APPLICANT: Carr, Grant J.
; APPLICANT: Yamamoto, Robert T.

```

```

; APPLICANT: Xu, H. Howard
; TITLE OF INVENTION: Identification of Essential Genes in
; FILE REFERENCE: ELITRA.011A
; CURRENT APPLICATION NUMBER: US/09/815,242
; PRIOR FILING DATE: 2001-03-21
; PRIOR APPLICATION NUMBER: 60/191,078
; PRIOR FILING DATE: 2000-03-21
; PRIOR APPLICATION NUMBER: 60/206,848
; PRIOR FILING DATE: 2000-05-23
; PRIOR APPLICATION NUMBER: 60/207,727
; PRIOR FILING DATE: 2000-05-26
; PRIOR APPLICATION NUMBER: 60/242,578
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: 60/253,625
; PRIOR FILING DATE: 2000-11-27
; PRIOR APPLICATION NUMBER: 60/257,931
; PRIOR FILING DATE: 2000-12-22
; PRIOR APPLICATION NUMBER: 60/269,308
; PRIOR FILING DATE: 2001-02-16
; NUMBER OF SEQ ID NOS: 14110
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 11900
; LENGTH: 212
; TYPE: PRT
; ORGANISM: Pseudomonas aeruginosa
US-09-815-242-11900

```

```

Query Match          13.4%; Score 542; DB 10; Length 212;
Best Local Similarity 53.3%; Pred. No. 1.9e-37;
Matches 112; Conservative 34; Mismatches 50; Indels 14; Gaps 6;

```

```

543 FTLLKGIAPLEKAVNDTALIPKQFLTKIKRTGLGNALFYEMR---NEDGTEKS---- 595
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
4 YTGQTLVAPLIDANVDTOIIPKQFLSKIKRTGFGNGLDEMRYLDVCGPGQNSKRPL 63
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
596 --DFVUNKEBYRKASILVTCGANFGCGSSREHAPWALINDGFSVIAPSPADIFFNNSFK 653
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
64 NPDVFNINOPRYQASVILAR-ENFGCGSSREHAPWALDEYGFRTVIAPSYADIFPNNSFK 122
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
654 NGMLPPIPDQOIEAI--AAEARKKEIFVDLPNQLIKNATGETICTPEVEEERKICLV 711
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
123 NGLLPI-LIPEAEVDLFPQVEANEGYQSIDLAAGTVTRPDGK-VLGFVEVDFPRKICLL 180
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
712 NGLDIGLTMQMEDKIAFEFAKWTRETPML 741
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
181 NGLDIGLTLQDADAIRAFEDGVRQGPML 210
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :

```

```

RESULT 12
US-10-027-450-36
; Sequence 36, Application US/10027450
; Patent No. US20020102715A1
; GENERAL INFORMATION:
; APPLICANT: Falco, Saverio Carl
; APPLICANT: Hiltz, William D.
; APPLICANT: Kinney, Anthony J.
; APPLICANT: Cahoon, Rebecca E.
; APPLICANT: Rafalski, J. Antoni
; TITLE OF INVENTION: PLANT BRANCHED CHAIN AMINO ACID BIOSYNTHETIC ENZYMES
; FILE REFERENCE: BB-1126
; CURRENT APPLICATION NUMBER: US/10/027,450
; PRIOR FILING DATE: 2001-12-20
; PRIOR APPLICATION NUMBER: 60/063,423
; PRIOR FILING DATE: 1997 October 28
; NUMBER OF SEQ ID NOS: 54
; SOFTWARE: Microsoft Word Version 7.0A
; SEQ ID NO 36
; LENGTH: 428
; TYPE: PRT
; ORGANISM: Zea mays
US-10-027-450-36

```

Query Match 13.0%; Score 528.5; DB 12; Length 428;
Best Local Similarity 31.9%; Pred. No. 7,6e-36;
Matches 152; Conservative 65; Mismatches 165; Indels 95; Gaps 16;

QY 33 IDRLHVEVTSQA---FEGLRNAGRKVRPPDCTLATDHNVPVTSRKALKDIASFIKED 89
DB 12 IDVLMTHDVCVGGTTIGFKKEFGEDAKWDREKWIIPDHYIFTSDERANRV-----D 65

QY 90 DSRTQCVLEENVEFGVYF---GLSKR-----QGIHVHVGPGOGFTLPQTGVVCGD 140
DB 66 ILRDPCA--LEQNIK-----YFYDIIKDLSDFRANPDYKGVCHIALAQEGHCRPGEVLLGTD 118

QY 141 SHTSTHGAFCALAFAGTGTSEVHVLAATQCLITKRSKNMRIQVDELAPGVSSKDVVLHAI 200
DB 119 SHTCNAGAFQGFATGNTDAGFVMTGKALLKVPPTIRFILDGEMPPYLLAKDLILQII 178

QY 201 GIITAGGTGAVIEFCGVSIRLSMEARMSICNMSIEGGARAGMVAPEITFEYLKGRPL 260
DB 179 GEISVSGATYKSMFEVSGTVESLTMEERMTLCNMVVEAGGKNGVPADETTFKYLEGR-- 236

QY 261 APKYDSEPHKATQYWKNLQSDPCAXYDIDVFIDAKDIVPTLTWGTSPEDVVPITGVVDP 320
DB 237 -----TSVDYQPYSDAEARFFSDYRFDVSKLEPVW---AKPHS-----PD 274

QY 321 PETEATEAKKADRRMLQYMGKAGTPEMDIPVDKVFISGCTNSRIEDLRAAAAVVVKGRK 380
DB 275 NRALARECK-----DVKIDRVYIGSCTGGKTEDFLAAAKVFLASG 314

QY 381 KAPNVKSAMV-----VPGSLVKTOAEEBGLDKIFEEAGFEW-REAGCSMC 425
DB 315 KVKVPTFLVPATQKVMVDVYSLVPVPGSG-GKTCAQ-----IFEEAGCDTPASPNCGAC 367

QY 426 LGMNPDLAPQER---CASTSNRNFEGRQG-AGGRTHLMSPVMAAAAGIVGKLADVR 478
DB 368 LGGPRDTYARMNEPTVCVSTTNRNFPGRMGHKEGOIYLASPYTAAASALTGYVTDPR 424

RESULT 13
US-10-027-450-38
; Sequence 38, Application US/10027450
; Patent No. US20020102715A1
; GENERAL INFORMATION:
; APPLICANT: Falco, Saverio Carl
; APPLICANT: Hitz, William D.
; APPLICANT: Kinney, Anthony J.
; APPLICANT: Cahoon, Rebecca E.
; APPLICANT: Rafalski, J. Antoni
; TITLE OF INVENTION: PLANT BRANCHED CHAIN AMINO ACID BIOSYNTHETIC ENZYMES
; FILE REFERENCE: BB-1126
; CURRENT APPLICATION NUMBER: US/10/027,450
; CURRENT FILING DATE: 2001-12-20
; PRIOR APPLICATION NUMBER: 60/063,423
; PRIOR FILING DATE: 1997 October 28
; NUMBER OF SEQ ID NOS: 54
; SOFTWARE: Microsoft Word Version 7.0A
; SEQ ID NO 38
; LENGTH: 443
; TYPE: PRT
; ORGANISM: Zea mays
US-10-027-450-38

Query Match 12.9%; Score 523.5; DB 12; Length 443;
Best Local Similarity 30.9%; Pred. No. 2.1e-35;
Matches 147; Conservative 69; Mismatches 164; Indels 95; Gaps 14;

QY 33 IDRLHVEVTSQAPEGRLR---NAGRKVRPPDCTLATDHNVPVTSRKALKDIASFIKED 89
DB 27 DVVLMTHDVCVGGAFIDFKKEFGEDARVWDREKLWIPDPHYIFTSDEGRKENV-----D 80

QY 90 DSRTQCVLEENVEFGVYF---GLSKR-----QGIHVHVGPGOGFTLPQTGVVCGD 140
DB 81 ILRDPCA--EQNIK-----YFYDIIKDLSDFRANPDYKGVCHIALAQEAHCRPGEVLLGTD 133

QY 141 SHTSTHGAFCALAFAGTGTSEVHVLAATQCLITKRSKNMRIQVDELAPGVSSKDVVLHAI 200
DB 134 SHTCNAGAFQGFATGNTDAGFVMTGKALLKVPPTIRFILDGEMPPYLLAKDLILQII 193

QY 201 GIITAGGTGAVIEFCGVSIRLSMEARMSICNMSIEGGARAGMVAPEITFEYLKGRPL 260
DB 194 GEISVSGATYKSMFEVSGTVESLTMEERMTLCNMVVEAGGKNGVPADETTFKYLEG--- 250

QY 261 APKYDSEPHKATQYWKNLQSDPCAXYDIDVFIDAKDIVPTLTWGTSPEDVVPITGVVDP 320
DB 251 -----KTSVDYEPVYSDAARFFSDYRFDVSKLEPVVAKPHSPDNRAP----- 293

QY 321 PETEATEAKKADRRMLQYMGKAGTPEMDIPVDKVFISGCTNSRIEDLRAAAAVVVKGRK 380
DB 294 ---ARECK-----DVKIDRVYIGSCTGGKTEDFLAAAKVFLASG 329

QY 381 KAPNVKSAMV-----VPGSLVKTOAEEBGLDKIFEEAGFEW-REAGCSMC 425
DB 330 KVKVPTFLVPATQKVMVDVYSLVPVPGSG-----GKTCQIFEEAGCDTPASPNCGAC 382

QY 426 LGMNPDLAPQER---CASTSNRNFEGRQG-AGGRTHLMSPVMAAAAGIVGKLAD 476
DB 383 LGGPRDTYARMNEPTVCVSTTNRNFPGRMGHKEGOIYLASPYTAAASALTGYVTD 437

RESULT 14
US-09-815-242-14016
; Sequence 14016, Application US/09815242
; Patent No. US20020061569A1
; GENERAL INFORMATION:
; APPLICANT: Haselbeck, Robert
; APPLICANT: Ohlsen, Karl L.
; APPLICANT: Zyskind, Judith W.
; APPLICANT: Wall, Daniel
; APPLICANT: Trawick, John D.
; APPLICANT: Carr, Grant J.
; APPLICANT: Yamamoto, Robert T.
; APPLICANT: Xu, H. Howard
; TITLE OF INVENTION: Identification of Essential Genes in
; FILE REFERENCE: ELITRA.011A
; CURRENT APPLICATION NUMBER: US/09/815,242
; CURRENT FILING DATE: 2001-03-21
; PRIOR APPLICATION NUMBER: 60/191,078
; PRIOR FILING DATE: 2000-03-21
; PRIOR APPLICATION NUMBER: 60/206,848
; PRIOR FILING DATE: 2000-05-23
; PRIOR APPLICATION NUMBER: 60/207,727
; PRIOR FILING DATE: 2000-05-26
; PRIOR APPLICATION NUMBER: 60/242,578
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: 60/253,625
; PRIOR FILING DATE: 2000-11-27
; PRIOR APPLICATION NUMBER: 60/257,931
; PRIOR FILING DATE: 2000-12-22
; PRIOR APPLICATION NUMBER: 60/269,308
; PRIOR FILING DATE: 2001-02-16
; NUMBER OF SEQ ID NOS: 14110
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 14016
; LENGTH: 201
; TYPE: PRT
; ORGANISM: Salmonella typhi
US-09-815-242-14016

Query Match 12.5%; Score 506; DB 10; Length 201;
Best Local Similarity 53.1%; Pred. No. 1.7e-34;
Matches 104; Conservative 36; Mismatches 48; Indels 8; Gaps 6;

QY 542 KFTILKGAAPLEKANVDTDAIIPKQFLKTIKRTGLGNALFYEMRF-NEDGTEKS-DFVL 599
DB 4 KFTQHTGLVVPDAAANVDTDAIIPKQFLQKVTGTGCAHLNDFLDEKGOQPNPEVL 63

QY 600 NKEPRKASTIVCTGANGCGSSREHAPMALNDPGRSVIAPSPADIFPNNSFKNGMLPI 659
Db 64 NPEPYQAGSILLAR-ENGCGSSREHAPMALTDYGFKVVIAPSPADIFYGNSFNNQLLPV 122
QY 660 PIKQAOAIEAI--AAEAPAGKEIEVDLPNOLIKNATGENTCFEEVEEPFKHCLVNLGDI 717
Db 123 KLSDE-QVDEFTLVKANPGIKFEVDLQAQVK--AGDKTYSFKIDDFRRHCLNGLDSI 179
QY 718 GLTWOMEDKIAEPEAK 733
Db 180 GLTLQHEDAIAEYENK 195

RESULT 15
US-09-815-242-11165
; Sequence 1165, Application US/09815242
; Patent No. US20020061569A1
; GENERAL INFORMATION:
; APPLICANT: Haselbeck, Robert
; APPLICANT: Ohlssen, Karl L.
; APPLICANT: Zyskind, Judith W.
; APPLICANT: Wall, Daniel
; APPLICANT: Trawick, John D.
; APPLICANT: Carr, Grant J.
; APPLICANT: Yamamoto, Robert T.
; APPLICANT: Xu, H. Howard
; TITLE OF INVENTION: Identification of Essential Genes in
; FILE REFERENCE: ELITRA.011A
; CURRENT APPLICATION NUMBER: US/09/815,242
; CURRENT FILING DATE: 2001-03-21
; PRIOR APPLICATION NUMBER: 60/191,078
; PRIOR FILING DATE: 2000-03-21
; PRIOR APPLICATION NUMBER: 60/206,848
; PRIOR FILING DATE: 2000-05-23
; PRIOR APPLICATION NUMBER: 60/207,727
; PRIOR FILING DATE: 2000-05-26
; PRIOR APPLICATION NUMBER: 60/242,578
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: 60/253,625
; PRIOR FILING DATE: 2000-11-27
; PRIOR APPLICATION NUMBER: 60/257,931
; PRIOR FILING DATE: 2000-12-22
; PRIOR APPLICATION NUMBER: 60/269,308
; PRIOR FILING DATE: 2001-02-16
; NUMBER OF SEQ ID NOS: 1410
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 11165
; LENGTH: 200
; TYPE: prt
; ORGANISM: Haemophilus influenzae
US-09-815-242-11165

Query Match 12.2%; Score 495; DB 10; Length 200;
Best Local Similarity 53.4%; Pred. No. 1.4e-33;
Matches 103; Conservative 34; Mismatches 48; Indels 8; Gaps 6;
QY 543 FTLLKGIAPLEFANVDTDAIIPKQFLTKRTGLGNALFYENKRF-NEDGTESK-DEFLVN 600
Db 4 FQOLSGLVPLDLAANVDTDAIIPKQFLTKRTGLGNALFYENKRF-NEDGTESK-DEFLVN 63
QY 601 KRPYRKASTIVCTGANGCGSSREHAPMALNDPGRSVIAPSPADIFPNNSFKNGMLPI 660
Db 64 YQYQAGSILLAR-KNLGCGSSREHAPMALADYGFKVVIAPSPADIFYGNSFNNQLLPV 122
QY 661 IKDQAOAIEAI--AAEAPAGKEIEVDLPNOLIKNATGENTCFEEVEEPFKHCLVNLGDI 718
Db 123 LSEB-EVEEIFQWVANEQGIHVDLEAMTV--TVGDKVYTFEIDFRRHCLNGLDSI 179
QY 719 LTMOMEDKIAEPE 731
Db 180 LTLQHEDKISAYE 192

RESULT 16
US-09-939-980-476
; Sequence 476, Application US/09939980
; Patent No. US20020082234A1
; GENERAL INFORMATION:
; APPLICANT: Black, Michael
; Burnham, Martin
; Hodgson, John
; Knowles, David
; Lonetto, Michael
; Nicholas, Richard
; Pratt, Julie
; Reichard, Richard
; Rosenberg, Martin
; Ward, Judith
; TITLE OF INVENTION: No. US20020082234A1 Prokaryotic Polynucleotides,
; Polypeptides and Their Uses
; NUMBER OF SEQUENCES: 534
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: SmithKline Beecham Corporation
; STREET: 709 Swedeland Road
; CITY: King of Prussia
; STATE: PA
; COUNTRY: USA
; ZIP: 19406-0939
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSeq for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/939,980
; FILING DATE: 27-Aug-2001
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/936,165
; FILING DATE: <Unknown>
; ATTORNEY/AGENT INFORMATION:
; NAME: Gimm, Edward R.
; REGISTRATION NUMBER: 38,891
; REFERENCE/DOCKET NUMBER: P50549
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 610-270-4478
; TELEFAX: 610-270-5090
; TELEX: <Unknown>
; INFORMATION FOR SEQ ID NO: 476:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 173 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: Protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 476:
US-09-939-980-476

Query Match 12.2%; Score 493; DB 10; Length 173;
Best Local Similarity 56.4%; Pred. No. 1.7e-33;
Matches 101; Conservative 21; Mismatches 49; Indels 8; Gaps 2;
QY 302 LWTGSPEDVVPITGVDPDETFAEAKKADGRMLQYGLKAGTPMEDIPVDKVEIGSC 361
Db 1 VTWGTNPEMGVNFSEPF-----EINDINDQRAVDYVGLPQGAEDIDLGVFLGSC 53
QY 362 TNSRTEDLRAAAVYKGRKAPNVASAMVVPSSGLVKTQAESEGLDKITEEAGFEWREAG 421
Db 54 TNAKSDLEASHIVKGRKVPNI-TAIVPSSRTVKKEAEKLGDTTIFKNAGFEWREAG 112
QY 422 CSMCLGNPDIILAPQERCASTSNRNFEGROGAGGRTHTMSPVMAAAGIVGKLADVRKL 480
Db 113 CSMCLGNPDIILAPQERCASTSNRNFEGROGAGGRTHTMSPVMAAAGIVGKLADVRKL 171

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RESULT 17
US-09-815-242-10020
; Sequence 10020, Application US/09815242
; Patent No. US20020061569A1
; GENERAL INFORMATION:
; APPLICANT: Haselbeck, Robert
; APPLICANT: Ohlsen, Kari L.
; APPLICANT: Zyskind, Judith W.
; APPLICANT: Wall, Daniel
; APPLICANT: Trawick, John D.
; APPLICANT: Carr, Grant J.
; APPLICANT: Yamamoto, Robert T.
; APPLICANT: Xu, H. Howard
; TITLE OF INVENTION: Identification of Essential Genes in
; FILE REFERENCE: ELITRA.011A
; CURRENT APPLICATION NUMBER: US/09/815,242
; CURRENT FILING DATE: 2001-03-21
; PRIOR APPLICATION NUMBER: 60/191,078
; PRIOR FILING DATE: 2000-03-21
; PRIOR APPLICATION NUMBER: 60/206,848
; PRIOR FILING DATE: 2000-05-23
; PRIOR APPLICATION NUMBER: 60/207,727
; PRIOR FILING DATE: 2000-05-26
; PRIOR APPLICATION NUMBER: 60/242,578
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: 60/253,625
; PRIOR FILING DATE: 2000-11-27
; PRIOR APPLICATION NUMBER: 60/257,931
; PRIOR FILING DATE: 2000-12-22
; PRIOR APPLICATION NUMBER: 60/269,308
; PRIOR FILING DATE: 2001-02-16
; NUMBER OF SEQ ID NOS: 14110
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 10020
; LENGTH: 201
; TYPE: PRT
; ORGANISM: Escherichia coli
US-09-815-242-10020

Query Match 12.1%; Score 491; DB 10; Length 201;
Best Local Similarity 53.1%; Pred. No. 3.1e-33;
Matches 104; Conservative 31; Mismatches 53; Indels 8; Gaps 6;

QY 542 KFTILKGIAAPLEKANVDTDAIIPKQFLKTKRTGLGNALFYEMRF-NEDGTEKS-DFVL 599
DB 4 KFTIKTGLVPLDAANVDTDAIIPKQFLKTKRTGLGNALFYEMRFNEDGTEK--SDFVL 63

QY 600 NKEPYRKASILVCTGANFGCGSSREHAPWALNDFGIRSVIAPSFADIFFNNSFKNGMLPI 659
DB 64 NFQYQGASILLAR-ENFGCGSSREHAPWALTDYGFVKVVIAPSPADIFYGNSFNNQLLPV 122

QY 660 PIKQQAQIEAIAA--EAAEAGKEIEVDLPNQLIKNATGETICTFEEERKHCVLNGLDDI 717
DB 123 KLSD-AEVDLEFALVKANPGIHFDVLEAQEVK--AGEKTYRFTIDAFRRHCHMNGLDLSI 179

QY 718 GLTQMOMEDKIAEFKAK 733
DB 180 GLTLQHDHDAIAAYEAK 195

RESULT 18
US-09-815-242-11648
; Sequence 11648, Application US/09815242
; Patent No. US20020061569A1
; GENERAL INFORMATION:
; APPLICANT: Haselbeck, Robert
; APPLICANT: Ohlsen, Kari L.
; APPLICANT: Zyskind, Judith W.
; APPLICANT: Wall, Daniel
; APPLICANT: Trawick, John D.
; APPLICANT: Carr, Grant J.
; APPLICANT: Yamamoto, Robert T.
; APPLICANT: Xu, H. Howard
; TITLE OF INVENTION: Identification of Essential Genes in
; FILE REFERENCE: ELITRA.011A
; CURRENT APPLICATION NUMBER: US/09/815,242
; CURRENT FILING DATE: 2001-03-21
; PRIOR APPLICATION NUMBER: 60/191,078
; PRIOR FILING DATE: 2000-03-21
; PRIOR APPLICATION NUMBER: 60/206,848
; PRIOR FILING DATE: 2000-05-23
; PRIOR APPLICATION NUMBER: 60/207,727
; PRIOR FILING DATE: 2000-05-26
; PRIOR APPLICATION NUMBER: 60/242,578
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: 60/253,625
; PRIOR FILING DATE: 2000-11-27
; PRIOR APPLICATION NUMBER: 60/257,931
; PRIOR FILING DATE: 2000-12-22
; PRIOR APPLICATION NUMBER: 60/269,308
; PRIOR FILING DATE: 2001-02-16
; NUMBER OF SEQ ID NOS: 14110
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 10020
; LENGTH: 201
; TYPE: PRT
; ORGANISM: Klebsiella pneumoniae
US-09-815-242-11648

Query Match 11.4%; Score 461.5; DB 10; Length 200;
Best Local Similarity 48.7%; Pred. No. 8.7e-31;
Matches 96; Conservative 38; Mismatches 54; Indels 9; Gaps 6;

QY 542 KFTILKGIAAPLEKANVDTDAIIPKQFLKTKRTGLGNALFYEMRFNEDGTEK--SDFVL 599
DB 4 KFTIKTGLVPLDAANVDTDAIIPKQFLKTKRTGLGNALFYEMRFNEDGTEK--SDFVL 63

QY 600 NKEPYRKASILVCTGANFGCGSSREHAPWALNDFGIRSVIAPSFADIFFNNSFKNGMLPI 659
DB 64 NFQYQGASILLAR-ENFGCGSSAS-TPWALTDYGFVKVVIAPSPADIFYGNSFNNQLLPV 121

QY 660 PIKQQAQIEAI--AAEAGAGKEIEVDLPNQLIKNATGETICTFEEERKHCVLNGLDDI 717
DB 122 TLSDE-QVDELKFLVQANPGITFEVDLEAQVVK--AGDKTYSFKIDDFRRHCHMNGLDLSI 178

QY 718 GLTQMOMEDKIAEFKAK 734
DB 179 GLTLQHEAAISDYERKL 195

RESULT 19
US-09-815-242-12157
; Sequence 12157, Application US/09815242
; Patent No. US20020061569A1
; GENERAL INFORMATION:
; APPLICANT: Haselbeck, Robert
; APPLICANT: Ohlsen, Kari L.
; APPLICANT: Zyskind, Judith W.
; APPLICANT: Wall, Daniel
; APPLICANT: Trawick, John D.
; APPLICANT: Carr, Grant J.
; APPLICANT: Yamamoto, Robert T.
; APPLICANT: Xu, H. Howard
; TITLE OF INVENTION: Identification of Essential Genes in
; FILE REFERENCE: ELITRA.011A
; CURRENT APPLICATION NUMBER: US/09/815,242
; CURRENT FILING DATE: 2001-03-21
; PRIOR APPLICATION NUMBER: 60/191,078
; PRIOR FILING DATE: 2000-03-21
; PRIOR APPLICATION NUMBER: 60/206,848
; PRIOR FILING DATE: 2000-05-23
; PRIOR APPLICATION NUMBER: 60/207,727
; PRIOR FILING DATE: 2000-05-26
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; PRIOR APPLICATION NUMBER: 60/242,578
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: 60/253,625
; PRIOR FILING DATE: 2000-11-27
; PRIOR APPLICATION NUMBER: 60/257,931
; PRIOR FILING DATE: 2000-12-22
; PRIOR APPLICATION NUMBER: 60/269,308
; PRIOR FILING DATE: 2001-02-16
; NUMBER OF SEQ ID NOS: 14110
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 12157
; LENGTH: 190
; TYPE: PR1
; ORGANISM: Staphylococcus aureus
US-09-815-242-12157

Query Match          10.4%; Score 422; DB 10; Length 190;
Best Local Similarity 47.7%; Pred. No. 1.5e-27;
Matches 94; Conservative 29; Mismatches 66; Indels 8; Gaps 4;

QY 538 AGLEPKFTILKGIAAPLEKANYDTDAIIPKQFLKTIKRTGNGALFYEMRPNEDGTEKSPF 597
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 2 AAIKPIITTVGKIVPLFNDNIDTDQIIPKVLKRIKSGGFPFADWKRYLFDGSDNPDF 61
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

QY 598 VLNKEPRKASILVCTGANFGCGSSREHAPMALNDFGIRSVIAPSPADIFFNNSFKNGML 657
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 62 NPNKPPQYKGSIL--TGNFGCGSSREHAAVALKDYGHIIAGSPFSDIFVNNCTKNAML 120
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

QY 658 PIPKDAQOIEAIAAEARAKEIEVDLPNOLIKNATGETICTFEVEEPRKGLVNGLDDI 717
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 121 PIVLEKAR-EHLAKV---EIVVDLPNQIV--SSPKSFHFEIDETKKNKLVLNGLDDI 173
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

QY 718 GLTMOMEDIKIAEPEAKM 734
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 174 AITLQYESLIEKYEKSL 190
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

RESULT 20
US-09-738-626-4953
; Sequence 4953, Application US/09738626
; Publication No. US20020197605A1
; GENERAL INFORMATION:
; APPLICANT: NAKAGAWA, SATOSHI
; APPLICANT: MIZOGUCHI, HIROSHI
; APPLICANT: ANDO, SEIKO
; APPLICANT: HAYASHI, MIKIRO
; APPLICANT: OCHIAI, KEIKO
; APPLICANT: YOKOI, HARUHIKO
; APPLICANT: TATEISHI, NAOKO
; APPLICANT: SENOH, AKIHIRO
; APPLICANT: IKEDA, MASATO
; APPLICANT: OZAKI, AKIO
; TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
; FILE REFERENCE: 249-125
; CURRENT APPLICATION NUMBER: US/09/738,626
; PRIOR APPLICATION NUMBER: 2000-12-18
; PRIOR FILING DATE: 1999-12-16
; PRIOR APPLICATION NUMBER: JP 00/159162
; PRIOR FILING DATE: 2000-04-07
; PRIOR APPLICATION NUMBER: JP 00/280988
; PRIOR FILING DATE: 2000-08-03
; NUMBER OF SEQ ID NOS: 7059
; SOFTWARE: PatentIn ver. 3.0
; SEQ ID NO 4953
; LENGTH: 197
; TYPE: PR1
; ORGANISM: Corynebacterium glutamicum
US-09-738-626-4953

Query Match          9.6%; Score 389.5; DB 9; Length 197;
Best Local Similarity 43.9%; Pred. No. 8.2e-25;
Matches 86; Conservative 36; Mismatches 63; Indels 11; Gaps 5;
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QY 540 LPKFTILKGIAAPLEKANYDTDAIIPKQFLKTIKRTGNGALFYEMRPNEDGTEKSPFL 599
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 1 MEKFTTYTGCVPLQSRNVNTDQIIPAVILKRVTRTGEDLFNSMRND-----PNFVL 55
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

QY 600 NKEPPRKASILVCTGANFGCGSSREHAPMALNDFGIRSVIAPSPADIFFNNSFKNGMLPI 659
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 56 NTDYKNGSVLV-AGPDFGCGSSREHAAVALMDYGFRAVFSRFADIFRNGSGKAGML-T 113
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

QY 660 PINDQOIEAI--AAEARAKEIEVDLPNOLIKNATGETICTFEVEEPRKGLVNGLDDI 717
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 114 GIMEQSDIEELMKLMEQTPLELTVNLEKQIV--TADGVVISFEVDPIYRRLMEGLDDA 171
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

QY 718 GLTMOMEDIKIAEPEAK 733
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 172 GLTLRKLDIEDYEAK 187
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

RESULT 21
US-09-738-626-5199
; Sequence 5199, Application US/09738626
; Publication No. US20020197605A1
; GENERAL INFORMATION:
; APPLICANT: NAKAGAWA, SATOSHI
; APPLICANT: MIZOGUCHI, HIROSHI
; APPLICANT: ANDO, SEIKO
; APPLICANT: HAYASHI, MIKIRO
; APPLICANT: OCHIAI, KEIKO
; APPLICANT: YOKOI, HARUHIKO
; APPLICANT: TATEISHI, NAOKO
; APPLICANT: SENOH, AKIHIRO
; APPLICANT: IKEDA, MASATO
; APPLICANT: OZAKI, AKIO
; TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
; FILE REFERENCE: 249-125
; CURRENT APPLICATION NUMBER: US/09/738,626
; PRIOR APPLICATION NUMBER: 2000-12-18
; PRIOR FILING DATE: 1999-12-16
; PRIOR APPLICATION NUMBER: JP 00/159162
; PRIOR FILING DATE: 2000-04-07
; PRIOR APPLICATION NUMBER: JP 00/280988
; PRIOR FILING DATE: 2000-08-03
; NUMBER OF SEQ ID NOS: 7059
; SOFTWARE: PatentIn ver. 3.0
; SEQ ID NO 5199
; LENGTH: 943
; TYPE: PR1
; ORGANISM: Corynebacterium glutamicum
US-09-738-626-5199

Query Match          9.1%; Score 367.5; DB 9; Length 943;
Best Local Similarity 22.6%; Pred. No. 6.3e-22;
Matches 178; Conservative 108; Mismatches 291; Indels 209; Gaps 29;

QY 118 GIVH-----VIGDEQFTLPFGTVVCGDSHTSGHAFGALAGIGTSEVENHVLATQ 168
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 179 GIVHQVNIERYLARVVDNGLAVPDCIGT-DSHTTMENGLILGNGVGGIEAEAAMLGQ 237
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

QY 169 CLITKSKRMRIQVDELAPGVSSKQVYTHAIGITAGGTGAVIEFCGVSINLSNEAR 228
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 238 PVSMLIPRVVGFKLGEIIVGVATDVVLITEMLRDHGVQKFEVEYSGGVAVPLANR 297
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

QY 229 MSICNNSIGARAGVAVPADITFEYLK--GRPLAPKYDSPENHKAATQYWKNLQSDPGAK 286
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 298 AITGNMSPFGSTCAMFPIDERTTKYLRTGRPREQVALVEAYAKAGQMLD-EDTYEAR 356
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

QY 287 YDIDVFIDAKDIVPTLWTGSPEDVVPITGVV---PDDETFATEAKKAD---GRRMLQ 338
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 357 YSEVLELDLSTVPSIAGKRPQDRITLSEAKQGRKDLPTYVDDAVSVDTISIATRMVN 416
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

QY 339 YNGLAGAGTMEIIPDK----- 355
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
```

Db 417 EGG---GOPEGVEADYNYNWAGSGESLATGAEGRPSPVTVASPOGGEYTIHGMVAI 473
Qy 356 VFISGCTNSRIEDLRAAAV-----KGRKAPNVKSMVPGSLVKTQAEELDKI 409
Db 474 ASITCTNTSNPNSVMIGALIAKAAEKLKSKPWYKT-ICAPGSQVDGYQORADLWDX 532
Qy 410 FEEAGFEWREAGSCMLGNPDILAPOERCAS-----TSNRNFEGRQAGGR- 456
Db 533 LEAMGFYLSGFCCTCIGNSGPL--PEEISAAINEHDLTATAVLSGNRNFEGRISPDVKM 590
Qy 457 THLSPVMAAAAGIVGK-----LADVRKLTIDYKASPHIAAYOKST 496
Db 591 NYLASPIWIAIYAIAGTMDFDENEALQDQDNDVFLKDI-----WPSTE 636
Qy 497 VTKPHVDERINODAHEKDI-----ADIPEDNNGPHTNTSASVGTSA---GLP- 541
Db 637 EIEDTIOQAISRELYEADYVFKGDKQWQELDVPTGDTFEWDENSTYIRKAPYFDGMPV 696
Qy 542 ---KETILKGIAAPLEKA--NVDTDALIPKQFLK----- 570
Db 697 EPVAVTDIOG-ARVIAKLGDSTVTDHISPASSIKPGTPAAQYLDHCVHERHDYNSLSRR 755
Qy 571 -----TIKRTGLGNALF-----YEMRFNEDGTEKSDVFNKPEPYRKAS---ILVCT 613
Db 756 GNHVMMRGTFANIRLQNLVDIAGGYTRDFTQEGAPQA-FYDASVNYKAAIGPLVLVG 814
Qy 614 GANFGCGSSREHAPWALNDFGIRSVIAPSFADIFFNNSFKNGMLPIPIKDOAIEAIAAE 673
Db 815 GREYGTGSSRDWAAKTNLLGIRAVITESFERIHRNLIQMGVVLPQFPAGESHESLGLD 874
Qy 674 ARAGEIEVDLPNQLIKNATGETICTFEVEEPRKHCIVNGLDLDIGLTMQMEDKIAEFAEK 733
Db 875 ---GTE-TFDITGLTALN-EGETPKVKTATKE---NG-----DWVEFDV 913
Qy 734 MTRTEP 739
Db 914 VRIDTP 919
RESULT 22
US-09-924-396B-20
; Sequence 20, Application US/09924396B
; Patent No. US20020165349A1
; GENERAL INFORMATION:
; APPLICANT: Kirsch, Wolff
; APPLICANT: Lennart, Anton
; APPLICANT: Kelln, Wayne
; APPLICANT: Kang, Dae-Kyung
; APPLICANT: Levine, Rodney
; APPLICANT: Rouault, Tracey
; TITLE OF INVENTION: IRON-REGULATING PROTEIN-2 (IRP-2) IS
; FILE REFERENCE: LOMAU.140A
; CURRENT APPLICATION NUMBER: US/09/924, 396B
; CURRENT FILING DATE: 2002-04-25
; PRIOR APPLICATION NUMBER: 60/222, 863
; PRIOR FILING DATE: 2000-08-04
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 20
; LENGTH: 963
; TYPE: PRT
; ORGANISM: Rattus No. US20020165349Alvegicus
US-09-924-396B-20
Query Match 8.1%; Score 329; DB 9; Length 963;
Best Local Similarity 22.7%; Pred. No. 1e-18;
Matches 168; Conservative 115; Mismatches 302; Indels 156; Gaps 28;
Qy 118 GIVH-----VIGPEQGFLLPGTTWVGCDSTHTSHGAFALAFGIGTSEVHVLATQ 168
Db 251 GMAHQVNLEHLSRVVFEADLLFP-DSVIGTDSHTWVNGLILGWGVGGIETEAVMLGL 309

Qy 169 CLITKSKNMRIQVDGELAPGVSSKDVVLHAIIGIITAGGTGAVIEFCGVSIRLSMEAR 228
Db 310 PVTLTLPVVGCELTSNNAFVTSIDIVLGTIKHLRQVGVAGKEVEFFGSGVSQLSIYDR 369
Qy 229 MSTCNMSIEGAGAGWAPDEITFEYLK--GRPLAPKYDPSPEHKAQYWKNLQSDPGAK 286
Db 370 TTIANMCPYGAILSPFPVNDVTLRLHEHTGDFDKTULESMEEYLKAVKLFRDNENSSPE 429
Qy 287 YDIDVFIDAKDIIVPTLTWTGTSPEVDVPIITGVPPDET-----FATAKAKADGRM 336
Db 430 YSQVIQNLNSIVASVSGPKPQDRVAVTDMKSDFOACLNEKVGFKGFQVAAEKQSDTVS 489
Qy 337 LOYVGLKAGTPMEDIPVDKVFISGCTNSRIEDLRAA-----AVVGRKKAAPNVKSAV 390
Db 490 VRYDGSSEYKLSHGSVIAAVI--SCTNCPNSVMLAAGLLAKKAVETGLRVKPYIRTSI- 546
Qy 391 VPISGLYKTOAEELGLDKIFEEAGFEWREAGSCMLG--MNPDLIAPOER-----CAS 441
Db 547 SPGSGMTHYLSSSGVLPLYSLKGLFEIVGYGCTCGVNTAPLSEAILNAVKGQDLATCGV 606
Qy 442 TS-NRNFEGRQAGGR-THLMSPVMAAAAGIVGKLADVRKLTIDYKASPHIAAYOKSTVTK 499
Db 607 LSGNKNFEGRLCDVCRANYLASPLVWYAIAGTVN-----IDFOTEP---LGTDSGTGN 658
Qy 500 PHVD-----ERINODAHEKDIIA-----NVDTDALIP-----KQFLKTIKRTGLCN 579
Db 659 IYLHDIWPSREEVHQIBEEHVILSMFKALKEKVMGNKRNWNSLDAPSDSVLPFMDVKSTYI 718
Qy 535 GTSAGLKPFTILKGIAAPLEKA-----NVDTDALIP-----KQFLKTIKRTGLCN 579
Db 719 RCPSEFFDKLTKEPAASQPIENAHVLLYLGDSVTTDHSFAGSIARSRAAKVLTNRGLTP 778
Qy 580 ALF--YEMRFNED-----GTEKSDVFNK-----EPYRKAS 608
Db 779 REFNSYGARRGNDVMTGRTGTANIKLFNKFGKPAKTIHPFSGQTLDFEAAELYQKEG 838
Qy 609 I--LVCTGANFGCGSSREHA---PWALNDFGIRSVIAPSFADIFFNNSFKNGMLPIPIKD 663
Db 839 IPLIILAGKYGSGNSRDWAAKGPYLL---GVKALAESYEKIHKDHLIGIGIAPLEFLP 895
Qy 664 QAQTEATAAEARAGKEI-EVDLPNOL-----IKNATGE---TICTFEVEEPRKHCIVN 712
Db 896 GENADSLG---SGREVSLSFPPELFPGLITNLTSTGKEFSVIAAFE----- 941
Qy 713 GLDDIGLTMQMEDKIAEFAEK 733
Db 942 --NDVEITLYKHGGLLNFVAR 960
RESULT 23
US-09-924-396B-18
; Sequence 18, Application US/09924396B
; Patent No. US20020165349A1
; GENERAL INFORMATION:
; APPLICANT: Kirsch, Wolff
; APPLICANT: Lennart, Anton
; APPLICANT: Kelln, Wayne
; APPLICANT: Kang, Dae-Kyung
; APPLICANT: Levine, Rodney
; APPLICANT: Rouault, Tracey
; TITLE OF INVENTION: IRON-REGULATING PROTEIN-2 (IRP-2) IS
; FILE REFERENCE: LOMAU.140A
; CURRENT APPLICATION NUMBER: US/09/924, 396B
; CURRENT FILING DATE: 2002-04-25
; PRIOR APPLICATION NUMBER: 60/222, 863
; PRIOR FILING DATE: 2000-08-04
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 18
; LENGTH: 952
; TYPE: PRT
; ORGANISM: Homo Sapiens

US-09-924-396B-18

Query Match 8.1%; Score 326.5; DB 9; Length 952;

Best Local Similarity 22.3%; Pred. No. 1.6e-18; Matches 165; Conservative 121; Mismatches 302; Indels 151; Gaps 29;

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QY 118 GIVH-----VIGPQGFLLPCTTVCCGSHSTHAFQALAGTGTSEVHLLAQ 168
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Db 239 GMAQIQLNLEYSRVVFEKKDLFP--DSVVGTDSHITMVGILGVGIGIEAAMLGL 297
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 169 CLIFKRSKMMRIVDVGELAPGVSSKDVVLLHAIGITAGCTGAVIEFCGSVIRSLSMEAR 228
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 298 PVSLLTPREVVCGLTGSSNPFVTSIDVVLGITKHLRQVAVAKFVFFSSGVSQLSIVR 357
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 229 MSIGNMSIEGAPARAVADEITFEYLKGRPLA--PKYDSPEWH-KATQYKMLQSDPG-A 285
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 358 TTIANMCEYGAIIISFFVDVNTLKHLEHTGFSKAKLEMETYLLKAVKLFRRDQNSGSE 417
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 286 KYDDVDFIDADIVPTLTWGTSPEDVVPITGVVDPET-----FATEKKKADGRR 335
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 418 EYSGVIGIINLNSIYPSVSGPKRPRDRVAVTDMKSDFOACLNEKVGKGFQIAAEKOKDIV 477
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 336 MLOYMGLKAGTPEMEDIPVDKYFISGCTNSRIEDLRPAA-----AVVKGKKAPNVKSM 389
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 478 SIHGESEYKLSHSGSVLAAYI--SCTNNCNPSVMLAAGLLAKKAVEAGLRVKEVYIRISL 535
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 390 VPPSGGLVKTQAEEGLDKIFEEAGFEWRACSMCLGNRPDI-----LAPQERCASTS 443
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 536 -SPSGMVTHTLSSGVLPRYLSKIGFEIVGCSCTCVGNTAPLSDAVLNAVGGDLVTG 594
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 444 N----RNFEGQAGGR--THLMSPPMAAAGIVGKL-----474
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 595 NFIIWKMFEGRLCDVRANYLASPLVVAAYLAGTVNIDFQTEPLGTDPGKNIVLHDIM 654
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 475 ---ADVRK-----LDTYKA-----SPHIAAYQ---KST-----496
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 655 PSREVRHVEBEHYLSFALKKDIEMGNKRMNSLEARDSVLFPMDLKSTYIRCSFPD 714
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 497 -VTKPVDRIINODAHENDIADIPEDNNGPHTNTSASVGTSGAGLPKFTILKGIAPLE- 554
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 715 KLTEPIALQAIENMH---VLLYLGDSVTTDHIISPAQSIARNSAAKAYLTNGL--TPRF 770
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 555 ---KANVDTDAIIPKQPLKTK--RTGLGNALFYEMRPNEDGTESDFVLNKEPYKASI 609
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 771 NSYGARGNDVVMRGTFPANIKLFNKFLGKPAKTIHFPSCQT--LDVPEAEALYKQEGI 828
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 610 --LVCTGANFGSGSREHA---PMAIANDFGIRSVIAPASADIFFNNNSFNGMLPIPIKQ 664
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 829 PLIILAGKTKYSGNSRDMAAKGPVLL--GVKAVLAESTEKIHKDLIGIAPLOFLPG 885
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 665 AQLEAIAAEARAKEIEVDLPNQL-----IKNATGE---TICTFEVEEPRKHCLVNGL 714
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 886 ENASLSLGSR--EFFSLTFPEBELSGITLINQTSTGKVFYSIASRE-----930
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 715 DDIGLTMOMEDKIAFEPAK 733
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 931 DDVEITLYKHGGLNFVAR 949
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
```

RESULT 24

US-09-815-242-11535

Sequence 11535, Application US/09815242

Patent No. US20020061569A1

GENERAL INFORMATION:

APPLICANT: Haselbeck, Robert

APPLICANT: Ohlsen, Kari L.

APPLICANT: Zyskind, Judith W.

APPLICANT: Wall, Daniel

APPLICANT: Trawick, John D.

APPLICANT: Carr, Grant J.

APPLICANT: Yamamoto, Robert T.

APPLICANT: Xu, H. Howard

TITLE OF INVENTION: Identification of Essential Genes in

TITLE OF INVENTION: Prokaryotes

FILE REFERENCE: ELITRA.011A

CURRENT APPLICATION NUMBER: US/09/815,242

CURRENT FILING DATE: 2001-03-21

PRIOR APPLICATION NUMBER: 60/191,078

PRIOR FILING DATE: 2000-03-21

PRIOR APPLICATION NUMBER: 60/206,848

PRIOR FILING DATE: 2000-05-23

PRIOR APPLICATION NUMBER: 60/207,727

PRIOR FILING DATE: 2000-05-26

PRIOR APPLICATION NUMBER: 60/242,578

PRIOR FILING DATE: 2000-10-23

PRIOR APPLICATION NUMBER: 60/253,625

PRIOR FILING DATE: 2000-11-27

PRIOR APPLICATION NUMBER: 60/257,931

PRIOR FILING DATE: 2000-12-22

PRIOR APPLICATION NUMBER: 60/269,308

PRIOR FILING DATE: 2001-02-16

NUMBER OF SEQ ID NOS: 14110

SOFTWARE: FastSeq for Windows Version 4.0

SEQ ID NO 11535

LENGTH: 852

TYPE: PRF

ORGANISM: Helicobacter pylori

US-09-815-242-11535

Query Match 7.5%; Score 303; DB 10; Length 852;

Best Local Similarity 25.9%; Pred. No. 1.2e-16;

Matches 140; Conservative 77; Mismatches 204; Indels 120; Gaps 26;

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QY 8 PQTLYDKVLOAHVVDKLDGTVLVYIDRHLVHEVTSFOAFGL--RNAGRVRRPDC--- 62
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Db 323 PETLLDEV-----FASGRIPILIGRGLTNKA---RKFLGLSESEAFKRPSPAKSDAK 371
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 63 --TLA-----TTDHNVPPT---SRKALXOIAS-----FIKE 88
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 372 GYTLAQKIVHAGCAGVKGILPGANCEPKVTTVGSDTTGAMTRDEVKELASLKPDAPFLQ 431
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 89 DDSRTQC-----VTLSENVKEGVTVYFGHS--DKRQGIHVHVGEGFTLLPCTTVCCGS 141
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 432 SFCHTAAYPRKPSDVSLHATLPGFITQKGVALLHPGDDVIVHTWLMRMG--LPDITLGSDS 489
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 142 HTSTHGAFG-ALAPGIGTSEVHVLATQCLITKRSKMMRIQVDEGLAPGVSSKDVY---- 196
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 490 HT-----RFPGLISFPAGSGGLVAFNAVGTWPLNMPESVLVRFKGMNPGITLRDLVNAIP 545
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 197 LHAII--GIITAGCTGAVIEFCGSVIR-----SLSMERMSICMSTEGARAGVAPD- 248
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 546 YVAIKKGLL-TVEKKGKIVFNGRITIEGLPDIKMQAFELSDASERSAAACVRLNK 604
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 249 EIRFEYLKG-----RPLAKRYDSPWHK---ATQYKKN-----LQSDPGAKYDIDVFID 294
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 605 EPMIEYIKSNIKLIDENIAGYEDKETLKKRRDMQMWKDPVLLPEPSNQAQYAAVID 664
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 295 AKDIV-PTLTWGTSPEDVVDITGVVDPETFAATEAKKADGRRMLQYMGKAGTPEMEDI 353
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 665 VAEITEPIIACPNDDPDVATLSEVLAD-----TTGKRPHA-----I 700
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 354 DKYFISGCTNSRIEDLRPAAAVVYKGRKAPNVKSAMVPPSGVLVKTQAEEGLDKIFEEA 413
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 701 DEVFISGCM-TNIGHPFAFGEIVK--NAPPSQARLWVPPSKMDEQELINGYAIFGAA 757
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 414 GFEMREAGSCMCLGNPDLIAPQERCASTSNRNPEGRGAGGRTHLMSPVAAAAAGIVGK 473
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 758 GARTVEPGLCKMG--NQARVDAVAVSTSTRNFDNMGMGAKYLLGSABELGAACALLGR 816
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
QY 474 L 474
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 817 I 817
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```

RESULT 25

US-09-815-242-11363

; Sequence 11363, Application US/09815242
; Patent No. US20020061569A1
; GENERAL INFORMATION:
; APPLICANT: Haselbeck, Robert
; APPLICANT: Ohlsen, Kari L.
; APPLICANT: Zyskind, Judith W.
; APPLICANT: Wall, Daniel
; APPLICANT: Trawick, John D.
; APPLICANT: Carr, Grant J.
; APPLICANT: Yamamoto, Robert T.
; APPLICANT: Xu, H. Howard
; TITLE OF INVENTION: Identification of Essential Genes in
; TITLE OF INVENTION: Prokaryotes
; FILE REFERENCE: ELITRA.011A
; CURRENT APPLICATION NUMBER: US/09/815,242
; CURRENT FILING DATE: 2001-03-21
; PRIOR APPLICATION NUMBER: 60/191,078
; PRIOR FILING DATE: 2000-03-21
; PRIOR APPLICATION NUMBER: 60/206,848
; PRIOR FILING DATE: 2000-05-23
; PRIOR APPLICATION NUMBER: 60/207,727
; PRIOR FILING DATE: 2000-05-26
; PRIOR APPLICATION NUMBER: 60/242,578
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: 60/253,625
; PRIOR FILING DATE: 2000-11-27
; PRIOR APPLICATION NUMBER: 60/257,931
; PRIOR FILING DATE: 2000-12-22
; PRIOR APPLICATION NUMBER: 60/269,308
; PRIOR FILING DATE: 2001-02-16
; NUMBER OF SEQ ID NOS: 14110
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 11363
; LENGTH: 853
; TYPE: PRT
; ORGANISM: Helicobacter pylori
US-09-815-242-11363

Query Match 7.5%; Score 303; DB 10; Length 853;
Best Local Similarity 25.9%; Pred. No. 1.2e-16;
Matches 140; Conservative 77; Mismatches 204; Indels 120; Gaps 26;

QY 8 POTLYDKVLQAHVVDKLDGTLLYIDRLHVEVTSQPAFGL--RNAGKVRPDC--- 62
DB 324 PFTLLDEV-----RASGRPLIIGRGLTNKA---RKFLGLGESEAPKPSAPKSDAK 372
QY 63 --TLA-----TTDHNVPPT---SRKALKDIAS-----FIKE 88
DB 373 GYTLAQKIVGHACGVKGILPGTYCEPKVTTVGSQDTTGAMTRDEVKELASLKFDAPFVLQ 432
QY 89 DDSRTQC-----VTLEENVKEFGVTYFGLS-DKROGIHVHIGVEQGTLPGLTGVVCGDS 141
DB 433 SFCHTAAYPKPSDVSUHLATLPGITORGVALHPGQGVHTWLNRMG--LPDTLGTGGDS 490
QY 142 HTSTHGAFG-ALAFGIGTSEVEHVLATQCLITKRSKNMRIQVDGELAPGVSKDVV---- 196
DB 491 HT-----RFLGGSFPAGSLVAFAAVTGTMPLNMPESVLVRFKGMNPGITLRLDVNAIP 546
QY 197 LHAI--GIIGTAGGTGAVTEFCGVSIR-----SLSHEARMSICNMSIEGGARAGMVPD- 248
DB 547 YYAIKKGLL-TVEKKGKINVFNGRIELEGLPDIKMEQAFELSDASAEASAAACVVRNLN 605
QY 249 EITFEVLKG-----RPLAPKDYSPWHK-----ATQVWKN-----LQSDPGAKYDIDVFID 294
DB 606 EMIEYLRKNIKLIDEMIASGYDEKTLKRRDAMQAWNDVNPVLEPDSNAQYAAVIEID 665
QY 295 AKDIV-PTLTWTGTSPPDVVPITGVPPDPETFAEAKKADGRMLQYMGLKAGTMDIPV 353
DB 666 VAEITEPILACPNPDVATLSEVLAD-----ITGKRPHA-----I 701
QY 354 DKVFTGSCNTNSRIEDLRRAAAAVYGRKKAPNVKSMVVPVGSGLVKVTOAEEGLDKIFEEA 413
DB 702 DEVFTIGSCM-TNIGHFRAFGEIVK--NAPPSQARLWVVPSPKMDQEQLINEGYAIFGAA 759

QY 414 GFEWREAGCSMCLGMNPDILLAPOERCASSTNRNPEGSGAGGRTHLMSPVNAAAAGIVGK 473
DB 759 GARTEVPGCSLCLMG-NQARVRDNAVVFSTTRNFDNRMGKAVYLGSAELGAACALLGR 817
QY 474 L 474
DB 818 I 818

Search completed: March 17, 2003, 08:55:11
Job time : 35 secs